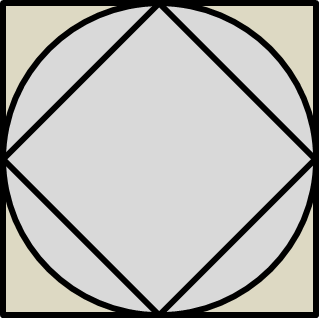
Worksheet on Geometric probability Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Period : \_\_\_\_\_\_\_\_\_

Probability = For geometric purposes that is changed to areas.

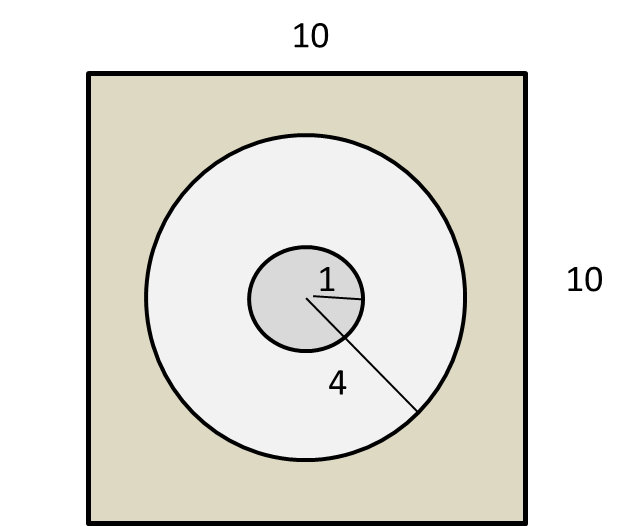
So, Geometric probability =

1. A circular dart board has diameter 40cm. It’s bulls eye has diameter 8 cm.
   1. If an amateur throws a dart and it hits the board, what is the probability that the dart hits the bulls eye?
   2. After many throws, 75 darts have hit the target. Estimate the number hitting the bulls eye.
2. Several hundred darts are thrown at the square dartboard shown. About what percentage of those hitting the board will land in the location described?
   1. Inside the inner square
   2. Outside the inner square but inside the circle.



8

1. A dart is thrown at a board 12 m long and 5 m wide. Attached to the board are 30 balloons, each with a radius of 10 cm. Assuming each balloon lies entirely on the board, find the probability that a dart hits the board will also hit a balloon.
2. A ship is known to have sunk in the ocean in a square region 100 mi on a side. A salvage vessel anchors at a random spot in this square. Divers search 1 mi in all directions from the point on the ocean floor directly below the vessel. What is the approximate probability that they locate the sunken ship on the first try?
3. An arrow lands on the target at a random point. What is the probability of the following…
   1. Probability the arrow lands in the inner circle.
   2. Probability it lands in the outer circle.
   3. Probability it lands in the outer circle but not the inner circle.



Problem Solving Worksheet

1. Arrange the digits 5, 6, 7, 8 and 9 on the lines to make the greatest product.

\_\_\_\_\_ \_\_\_\_\_ \_\_\_\_\_ x \_\_\_\_\_ \_\_\_\_\_

1. How many four digit numbers can you build with a 3, 4, a 6 and an 8? How many of those are over 6000?
2. A frog, a rabbit, and a kangaroo decide to go for a walk. The frog takes 2-foot hops, the rabbit 30-foot hops, and the kangaroo 7-foot hops. If they start their walk together, how far will they travel before all 3 have their feet on the ground at the same time?
3. The lion lies on Mondays, Tuesdays, and Wednesdays and tells the truth on other days. The unicorn lies on Thursdays, Fridays, and Saturdays and tells the truth on other days. In her adventures in Wonderland, Alice came across the two. The lion said, “Yesterday was one of my lying days.” The unicorn said, “Yesterday was one of my lying days.” What day of the week was it?
4. Mr. Jordan, Mr. George, Mr. Ahearn, and Mr. Gomez are the principal, the custodian, the math teacher, and the librarian of a school, but not necessarily in that order. Mr. George is taller than the math teacher and the librarian. The principal lunches alone. Mr. Ahearn, the math teacher, and the librarian always lunch together. Mr. Gomez is older than the math teacher. Who has each position?
5. Veritas always speak the truth, and Prevars always lie. A stranger in their country meets a party of 3 and asks to which race each belongs. The first mumbles an answer which the stranger cannot understand, the second says, “He said he was a Prevars”, and the third says to the second, “You’re a liar!”. Of what race was the third?